

What is claimed is:

1. An abnormality determining device for a longitudinal acceleration sensor for a vehicle comprising:

5 a first acceleration estimating unit for estimating a vehicle acceleration based on a wheel speed;

 a second acceleration estimating unit for estimating another vehicle acceleration based on the throttle angle of an engine;

10 a determination-permission deciding unit for setting a determination-permission region based on the estimated values of the first and second acceleration estimating unit so as to output a determination-permission signal when a deviation between the vehicle acceleration estimated by the first
15 acceleration estimating unit and the vehicle acceleration estimated by the second acceleration estimating unit is within a predetermined value; and

 a determining unit for setting an abnormality determining region based on the vehicle acceleration estimated by the second
20 acceleration estimating unit and for determining that the longitudinal acceleration sensor is abnormal, if the output value of the longitudinal acceleration sensor exists in the abnormality determining region for a predetermined time or longer in a state that the determination-permission deciding unit outputs a
25 determination-permission signal.

2. An abnormality determining method for a longitudinal acceleration sensor for a vehicle comprising steps of:

estimating a first vehicle acceleration based on a wheel
5 speed;

estimating a second vehicle acceleration based on the throttle angle of an engine;

outputting a determination-permission signal when a deviation between the first vehicle acceleration and the second
10 vehicle acceleration is within a predetermined value;

setting a determination-permission region based on the first and second vehicle acceleration;

setting an abnormality determining region based on the second vehicle acceleration; and

15 determining that the longitudinal acceleration sensor is abnormal, if the output value of the longitudinal acceleration sensor exists in the abnormality determining region for a predetermined time or longer in a state that a determination-permission signal is output.

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